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<b>(21) International Application Number:</b> PCT/AU99/00595 <b>(22) International Filing Date:</b> 23 July 1999 (23.07.99)  <b>(30) Priority Data:</b> 60/094,068                      24 July 1998 (24.07.98)                      US  <b>(71) Applicant (for all designated States except US):</b> ARISTO-CRAT LEISURE INDUSTRIES PTY. LTD. [AU/AU]; 71 Longueville Road, Lane Cove, NSW 2066 (AU).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> BOND, Anthony, Wayne [US/US]; 277 Adorno Drive, Henderson, NV 89014 (US). MACH, Ronald, Edward [US/US]; 7942 Wishing Well Road, Las Vegas, NV 89123 (US).  <b>(74) Agent:</b> F.B. RICE & CO.; 605 Darling Street, Balmain, NSW 2041 (AU).		<b>(81) Designated States:</b> AU, JP, NZ, US, ZA, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>With international search report.</i>

**(54) Title:** INPUT/OUTPUT INTERFACE AND DEVICE ABSTRACTION**(57) Abstract**

An electronic Input/Output Interface and device abstraction system used in gaming machine includes: a game central processing unit (the game "CPU"); an intelligent input/output controller board (the "IOCB"); an Industry Standard Architecture PC bus ("ISA bus"); and a framed message transport protocol. The IOCB facilitates the communications between the game CPU and virtual device services, which, are peripheral devices associated with the gaming system. These include devices such as displays, buttons, hoppers, coin mechanisms and bill validators. The framed message transport protocol includes: a message header, a body containing a virtual device message, and a packet validation signature. The game CPU communicates to gaming peripherals by sending virtual device messages across the ISA bus to the IOCB. The IOCB then routes the virtual device message to the appropriate virtual device services. The virtual device services are responsible for handling specific hardware, and are made up of virtual device drivers on the game CPU that communicate with virtual devices on the IOCB and use of the IOCB and the high speed interface enables the game CPU to use more of its available functions for controlling gaming functions rather than one operation of its associated peripheral devices.

